

Internal Cavity Surveillance System (ICSS)

- **Streaming Videos** to monitor vital/non-vital areas of the inner/outer cavity of an in flight aircraft.
- **Censors** used to monitor the vital objects/parts of the aircraft are linked/integrated with this ICSS entity. Since all crafts current have censors linked to their on-board and in-flight systems, censors will be enabled to trigger “on” and operate, in conjunction with, the ICSS monitors to provide instantaneous virtual feed-back for whatever given reason—and vise-a-versa.
- Events monitored by the ICSS are then relayed—in real-time—to master systems or hypermedia databases located on the ground. These master systems will be comparable to a virtual monitoring “command” center similar to control towers that supervise the skies as well as directing aviation traffic in and out of various airports.
- As applicable to this situation, this ICSS concept would constitute the use/transmission of real-time video images from inside an in-flight aircraft.

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This particular request is to seek protection/shelter to develop the above mentioned system for the **use/implementation of video for capturing and transmitting of events occurring inside an aircraft** while it is in flight. This new and innovative concept of applying current technologies of surveillance and transmission enables authorized persons to view and analyze events as they occur in all areas of the aircraft (i.e. cockpit, cargo area, and etc.). These transmissions will not be limited to authorized persons on the ground; the pilots will also have this same access to view his/her craft in real-time. As the title suggests, the entire internal cavity of the craft will be subjected to surveillance. With the ICSS, all events would have been captured—in real-time—and transmitted to a well-maintained database warehouses for future mining purposes. As an added feature, sound will be explored and integrated with this surveillance system.

ICSS, being applied to aircrafts, will then be fitted to land based entities (trains, busses, ships, autos, and etc) in that captured images will be transmitted back to receiving stations while the entity is currently in-route to its' destination.

I. Minimum Operational Specification (MOS)

- ✘ At minimum, there should be at least 2 to 4 high-resolution panoramic cameras located in each section of an aircraft on each side of its' isle.
- ✘ These captured images are then forward to satellites which then transmit/forwards these digital streams to the designated receiving entity. This is not exclusive, however; the craft itself may carry its' own transmission capabilities to direct these images to their sources on the ground.
- ✘ In addition to cameras in the passenger areas, cameras are place in any strategic area of the craft.
- ✘ ICSS will also be deployed to any/all vital areas deemed necessary (i.e. wiring compartments, landing gear compartments, fuselage compartment, cargo area, wings, rudders, and etc.).
- ✘ As part this on board system, the ground aspect of this system would include the necessary receiving stations that captures, converts, and forward these sanitized images to data warehouses to be distributed via the proper networks on to authorized personals; parts of these databases can be distributed to airport terminals as "thumbnails" pixels for viewing by persons waiting for arriving passengers.

II. Supplemental entities to the ICSS

- ✘ As a functional area of this system, the integration of sound will be a part of this system to be able to capture and transmit sound with the corresponding images.
- ✘ The advent of combining/integrating the available sensors of the craft with video to accommodate and facilitate the functions of each other, is also included in this ICSS entity. This would include the sensors being used to trigger on cameras in particular areas of the craft as situations dictates. There may not be a need for particular cameras to capture images until required (i.e. fires, blow-outs, lost of cabin pressure, fuel leaks, disturbances via extreme voice levels, and etc); all of the mentioned will be captured and made available to the flight crew as well as ground personnel.

III. Conclusion:

Finally, this request is making the claim that ICSS is a new and revolutionary process that is not currently being deployed nor has it been conceived. Although the various technologies are in existence, I propose that I will formulate this system, as prescribed, into one that will prove to be monumental in all aspect of its' creation.